

1904/05

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New Regulations Adopted Since This Catalogue Was Printed.

Beginning with the session of 1905-06 the tuition fee for all new matriculates for the regular course in the Department of Dentistry of the University of Pennsylvania will be \$150 for each term thereof and the present diploma fee of \$30 will be abolished in the case of all candidates for graduation coming under the foregoing regulation as to increased tuition fee.

This regulation does not apply to those who are already matriculated in the Department or to new matriculates for the Session of 1904-05.

The details of the curriculum for the Fourth Year of the Four Years' Course will be published in the announcement for the Session of 1905-06 and will include the estimate of expenses for the additional year.

Students who have earned the Bachelor's degree in courses similar to the Chemical and Biological courses of approved Universities may be matriculated in advanced standing with credit of one year in the Four Years' Course in Dentistry, subject to the approval of the Ad Interim Committee of the National Association of Dental Faculties.

Students presenting credentials from reputable medical, scientific or literary institutions for work done in said institutions and which is clearly a definite part of the dental curriculum may be accredited for such work and advanced in time the number of hours required for such work in the regular dental course, provided always that such credits shall amount to as much as one-half year to receive time recognition and that in no case shall they amount to more than one year's time.

NOTE.—By action of the National Association of Dental Faculties at a meeting held in St. Louis, July 16th, 1904, it was ruled that the degree Doctor of Dental Surgery may be conferred upon the completion of a three years' curriculum by colleges holding membership in the Association.

While the University of Pennsylvania favors a four years' curriculum, the Administration has decided to conform to the foregoing regulation of the Faculties' Association, at the same time offering and recommending a four years' course, optional for the present, and upon the completion of which students will be graduated with special distinction.

THE LIBRARY OF THE

EDWARD C. KIRK,

Dean.

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UNIVERSITY OF ILLINOIS

THE UNIVERSITY.

General Information.

LOCATION.

The buildings of the University of Pennsylvania, thirty in number, are situated in Philadelphia, on property covering an area of over fifty-eight acres. The University may be reached from the various railroad stations as follows: From the West Philadelphia station of the Pennsylvania Railroad, on foot west on Woodland avenue, a walk of less than ten minutes; from the Philadelphia and Reading Terminal station, by the electric cars on Market street west to Thirty-fourth street, thence on foot south to Woodland avenue, a trip of about fifteen minutes; or from the Baltimore and Ohio Railroad station by a walk of one square south to Walnut street, thence by car over the bridge west to Thirty-fourth street, a ride of about five minutes.

APPLICATIONS FOR CATALOGUES, ETC.

Applications for copies of the annual University Catalogue (published in December) should be addressed to the Assistant Secretary, University of Pennsylvania, Philadelphia, Pa. *The Catalogue is sold at twenty-five cents a copy.*

Special announcements, relating either to the separate Departments of the University, or to the various courses (liberal and scientific) offered in the College proper, *will be mailed free to anyone upon receipt of name and address.* Such applications should be addressed to the Deans of the several Departments.

All letters of inquiry regarding the internal regulations and requirements in each separate Department of the University should be addressed to the Dean of that Department (see *Administrative Officers*, following) and *not* to the Secretary of the University.

ACCOMMODATIONS FOR STUDENTS.

Lodging for students to the number of nearly six hundred is provided in the present dormitory system, which comprises a large block of buildings surrounding two open courts. Plans of the dormitories, indicating the general dimensions of the rooms, as well as other printed information, may be obtained upon application to the Bursar of the University, College Hall.

Prices for single rooms range from \$60 to \$140 per annum, and for double rooms from \$115 to \$265. About one-half of the rooms are *en suite*, providing for two students a common study, with two bedrooms. Most of the remaining rooms are for a single occupant. All rooms and halls are heated by steam and lighted by electricity. The buildings

are on the "separate staircase" system, all doors opening into the courts. On each floor and on every staircase are lavatories, with hot and cold shower baths, etc. Almost all the double, and many of the single, rooms have open fireplaces. The University supplies for each student the following furniture: bedstead, mattress, bureau, wash-stand, table, bookcase, chairs and toilet china.

A large temporary dining hall, or "Commons," is situated on a plot of ground adjacent to the Dormitories, where about seven hundred students can obtain board at \$3.50 a week, including service.

Board and lodging may be obtained also in the immediate vicinity of the University for five dollars a week and upward. Upon application at the offices of the Deans of the several Departments (see *Administrative Officers*, following), lists of approved boarding-houses may be seen.

HOUSTON HALL.

Houston Hall is the home of the Houston Club, to membership in which any member of the University is eligible. The fee for active membership in the club is \$3.00 per annum.

Its purposes are to provide for the students a place where all may meet socially on common ground, and to furnish every available facility for healthy recreation and amusement in leisure hours. The equipment of the Hall includes a reading-room, with a large number of periodicals and newspapers; smoking-rooms, billiard and pool tables, tables for chess and checkers, a correspondence room, bowling alleys, shuffle boards, a bath-room, including shower and needle baths, and a swimming pool; athletic trophy rooms; a large auditorium with grand organ; rooms for the University papers and other organizations; a dark room for amateur photographers and many other rooms for general purposes.

The University Christian Association, which has its headquarters in the Club-house, is prepared to furnish prospective students, through its Secretary, full information with regard to the various undergraduate social activities, both secular and religious.

BRIEF HISTORICAL SKETCH.

The University of Pennsylvania traces its origin to the year 1740, when a charitable school was founded in the city of Philadelphia. In 1749, a pamphlet entitled "Proposals Relative to the Education of Youth in Pennsylvania," written by Dr. Franklin, led to a united effort by certain citizens to raise this school to the dignity of an Academy. In 1751 this was accomplished, and the Academy, consisting of an English, a Mathematical and a Latin school, each under a master with subordinate tutors and ushers, was formally opened. Two years later (1753) a charter was granted to the trustees of the institution by Thomas and Richard Penn, the proprietaries of the Province of Pennsylvania.

Under the skilful training of the learned Rev. William Smith, the first Provost, the highest class of the Academy attained that proficiency which in a college course would have entitled its members to a degree. This led to a new appeal to the proprietaries for a collegiate charter. In 1755 such a charter was granted, which designated the institution as the "College and Academy of Philadelphia in the Province of Pennsylvania."

In 1764 Dr. Smith visited England to secure funds for the college, and received liberal support among men of all shades of religious belief. Concerned lest the institution might become sectarian, they urged the trustees to make a declaration of non-sectarian principles which should be binding on their successors. Accordingly, they resolved that henceforth, as theretofore, no question of religious belief should ever enter into questions of administering the affairs of the college or of appointing its officers.

In the revolutionary period, the college was looked upon with distrust by the radical patriots, and in 1779 the declaration above named was seized by the Assembly as a pretext for ousting the trustees, and incorporating a new institution, entitled the "University of the State of Pennsylvania," in which was vested all and singular the rights of the old corporation. After ten years of ineffectual work for both institutions, a compromise was effected and a union projected. In 1791, this amalgamation was confirmed by act of legislature, and the name "University of Pennsylvania" conferred upon the united institutions.

The University of Pennsylvania now includes the following departments, established at the dates indicated :

- (1740. Charitable School; out of which grew, in)
- 1751. The College.
- 1765. The Department of Medicine.
- 1790-1850. The Department of Law.
- 1874. The University Hospital.
- 1878. The Department of Dentistry.
- 1882. The Department of Philosophy.
- 1884. The Department of Veterinary Medicine.
- 1885. The Veterinary Hospital.
- 1885. The Department of Physical Education.
- 1889. The Museum of Archæology.
- 1891.* The University Library.
- 1892. The Laboratory of Hygiene.
- 1892. The Wistar Institute of Anatomy and Biology.

* Building erected.

ADMINISTRATIVE OFFICERS.

THE UNIVERSITY.

The General Offices are on the third floor of 400 Chestnut Street.

Provost—CHARLES C. HARRISON, LL. D.
General Offices, 400 Chestnut Street.

Vice-Provost—EDGAR F. SMITH, PH. D., SC. D.
Office in the JOHN HARRISON Laboratory of Chemistry, Thirty-fourth and Spruce Streets. Office hours, 8 A. M. to 6 P. M. Saturdays, 8 A. M. to 1 P. M.

Secretary—REV. JESSE Y. BURK, A. M., S. T. D.
General Offices, 400 Chestnut Street. Office hours, 11 A. M. to 3 P. M., except Saturdays.

Assistant Secretary—J. HARTLEY MERRICK, A. B.
Office, 101 College Hall. Office hours, 9.30 A. M. to 4.30 P. M.
Saturdays, 9.30 A. M. to 12.30 P. M.

Treasurer—FRANCIS P. SIBLEY.
General Offices, 400 Chestnut Street.

Bursar—EDWARD W. MUMFORD, PH. B.
Office, 102 College Hall. Office hours, 9 A. M. to 1 P. M., daily.
The Bursar's office is open from 9 A. M. to 5 P. M., daily. Saturdays, 9 A. M. to 1 P. M.

THE COLLEGE AND PROFESSIONAL FACULTIES.

Dean of the College Faculty—JOSIAH H. PENNIMAN, PH. D.
Office, 103 College Hall. Office hours, 9 A. M. to 12 M., daily.

Dean of the Faculty of Philosophy—WM. ROMAINE NEWBOLD, PH. D.
Office, 105 College Hall. Office hours, 10 A. M. to 12 M., daily.

ADMINISTRATIVE OFFICERS.

Dean of the Law Faculty—WILLIAM DRAPER LEWIS, B. S., LL. B.,
PH. D.

Office in the Law Department Building, Thirty-fourth and
Chestnut Streets. Office hours, 11 A. M. to 1 P. M. Saturdays,
9 A. M. to 10 A. M.

Dean of the Medical Faculty—CHARLES H. FRAZIER, M. D.

Office, Medical Hall. Office hour, 1 P. M., daily, except
Saturdays.

Dean of the Dental Faculty—EDWARD C. KIRK, D. D. S., Sc. D.
Office, Dental Hall. Office hours, 9 A. M. to 1 P. M., daily.

Dean of the Faculty of Veterinary Medicine—LEONARD PEARSON,
B. S., V. M. D.

Office, N. E. corner, Thirty-sixth and Spruce Streets. Office
hours, 8.30 A. M. to 12 M., daily.

GENERAL SUMMARIES.**OFFICERS OF INSTRUCTION.**

The College	128
Department of Philosophy.....	52
" " Law.....	18
" " Medicine.....	122
" " Dentistry.....	46
" " Veterinary Medicine.....	22
Emeritus Professors.....	3
	— 391
Duplications	75
Total	316

STUDENTS.

The College { School of Arts.....	519	1258
Towne Scientific School	543	
Courses for Teachers.....	196	
Department of Philosophy.....	201	
" " Law.....	322	
" " Medicine.....	472	
" " Dentistry.....	362	
" " Veterinary Medicine.....	82	
	— 2697	
Duplications	5	
Total	2692	

GEOGRAPHICAL SUMMARY OF STUDENTS.

Alabama	13	Costa Rica.....	2	Illinois	15
Australia	23	Cuba.....	5	Indiana	15
Austria.....	2	Delaware	26	Indian Ter.	1
Brazil	5	Dist. of Columbia.....	15	Iowa	6
Brit. West Indies	4	Ecuador	1	Japan	5
Bulgaria	1	England	4	Kansas	7
California.....	6	Florida	5	Kentucky	15
Canada.....	21	France	11	Louisiana.....	2
Chile	1	Georgia	7	Maine	10
Colorado	9	Germany	5	Maryland	34
Connecticut.....	34	Honduras.....	1	Massachusetts.....	42

SUMMARIES.

Mexico	4	Oregon	1	Tennessee	6
Michigan	7	Paraguay	1	Texas	4
Minnesota	4	Pennsylvania ..	1886	Vermont	5
Missouri	8	Peru	1	Virginia	20
Nebraska	1	Porto Rico	4	Washington.....	8
New Hampshire ..	10	P. E. Island.....	1	West Virginia	8
New Jersey	148	Rhode Island	9	Wisconsin	6
New York	125	Russia	5		—
New Zealand	10	South Carolina	2	Duplications	5
Nicaragua	2	South Dakota.....	2		—
North Carolina....	5	Spain	2	Total	2692
Ohio	46	Sweden.....	1		—
Oklahoma Ter.	1	Syria.....	1		

DEPARTMENT OF DENTISTRY.

FACULTY.

CHARLES C. HARRISON, LL. D., PROVOST.

EDGAR F. SMITH, PH. D., SC. D., VICE-PROVOST.

EDWIN T. DARBY, D. D. S., M. D., Professor of Operative Dentistry and Dental Histology.

JAMES TRUMAN, D. D. S., Professor of Dental Pathology, Therapeutics and Materia Medica.

EDWARD C. KIRK, D. D. S., SC. D., Professor of Clinical Dentistry, and DEAN OF THE FACULTY.

MATTHEW H. CRYER, D. D. S., M. D., Professor of Oral Surgery.

CHARLES R. TURNER, D. D. S., M. D., Professor of Mechanical Dentistry and Metallurgy.

EDWARD T. REICHERT, M. D., Professor of Physiology.

GEORGE A. PIERSOL, M. D., Professor of Anatomy.

JOHN MARSHALL, M. D., NAT. SC. D., LL. D., Professor of Chemistry and Toxicology.

*ALEXANDER C. ABBOTT, M. D., Professor of Bacteriology.

GEORGE G. MILLIKEN, D. D. S., M. D., Assistant Professor of Operative Technics.

R. HAMILL D. SWING, D. D. S., Assistant Professor of Oral Surgery and Anesthesia.

A. DEWITT GRITMAN, D. D. S., Assistant Professor of Mechanical Dentistry.

ELISHA H. GREGORY, JR., M. D., Assistant Professor of Anatomy.

DAVID H. BERGEY, A. M., M. D., Assistant Professor of Bacteriology.

* Absent on Public Business.

DEPARTMENT OF DENTISTRY.

LECTURERS.

JOHN D. THOMAS, D. D. S., Lecturer on Nitrous Oxide.

MEYER L. RHEIN, D. D. S., M. D., Lecturer on Dental Pathology.

SAFFORD G. PERRY, D. D. S., Lecturer on Operative Dentistry.

JULIO ENDELMAN, D. D. S., Lecturer on Materia Medica.

DEMONSTRATORS.

WILLIAM DIEHL, D. D. S., Demonstrator of Operative Dentistry.

JAMES G. LANE, D. D. S., Demonstrator of Mechanical Dentistry.

AMBLER TEES, D. D. S., Demonstrator of Dental Ceramics.

FREDERICK AMEND, JR., D. D. S., Demonstrator of Mechanical Dentistry.

MILTON N. KEIM, JR., D. D. S., Demonstrator of Mechanical Dentistry.

J. EDWARD DUNWOODY, D. D. S., Demonstrator of Crown and-Bridge Work.

ROBERT J. SEYMOUR, D. D. S., Demonstrator of Mechanical Dentistry.

A. SWANTON BURKE, D. D. S., Demonstrator of Mechanical Dentistry.

WILLIAM C. MARSH, D. D. S., Demonstrator of Operative Dentistry.

JAMES A. DOWDEN, D. D. S., Demonstrator of Mechanical Dentistry.

WILSON ZERFING, D. D. S., Demonstrator of Operative Dentistry.

G. JANVIER PAYNTER, D. D. S., Demonstrator of Tooth Modeling.

FREDERICK W. ALLEN, D. D. S., Demonstrator of Operative Techniques.

JOHN A. McCLAIN, D. D. S., Demonstrator of Operative Dentistry.

ROBERT FORMAD, M. D., Demonstrator of Normal Histology.

GEORGE H. CHAMBERS, M. D., Assistant Demonstrator of Normal Histology.

AUGUSTUS O. KOENIG, B. S., M. D., Demonstrator of Dental Metallurgy, and Assistant Demonstrator of Normal Histology.

JOHN M. SWAN, M. D., Demonstrator of Osteology.

DANIEL W. FETTEROLF, M. D., Demonstrator of Chemistry.

S. MERRILL WEEKS, D. D. S., Demonstrator of Orthodontia.

WALTER W. MCKAY, D. D. S., Demonstrator of Porcelain Inlay Work.

ALBERT W. JARMAN, D. D. S., Demonstrator of Mechanical Dentistry.

JEHU T. GORE, D. D. S., Demonstrator of Operative Dentistry.

EDWARD LODHOLZ, M. D., Demonstrator of Physiology.

J. GARRETT HICKEY, D. D. S., Assistant Demonstrator of Physiology.

GEORGE O. JARVIS, M. D., Assistant Demonstrator of Applied Anatomy.

CHARLES H. JACO, D. D. S., Demonstrator of Operative Dentistry.

ALFRED P. LEE, D. D. S., Demonstrator of Operative Dentistry.

CLINICAL INSTRUCTORS.

Dr. C. S. BECK,	Dr. DANIEL N. McQUILLEN,
Dr. EDWARD I. KEFFER,	Dr. H. C. REGISTER,
	Dr. JOHN R. YORKS.

ORGANIZATION OF THE DENTAL SCHOOL.

The Department of Dentistry of the University of Pennsylvania was organized in the early part of 1878. It was the third school created as the dental department of a university, having been preceded in this respect by the Harvard School of Dentistry (organized in 1867), and the Dental Department of the University of Michigan (organized in 1875).

The motive leading to the creation of dental schools as regular departments of the university educational system was the rapid growth of dentistry as a profession. This was shown by the improvement in the educational equipment of its practitioners, and by the tendency to broaden the courses of instruction furnished by dental schools to meet the continual necessity for more thorough training.

Realizing that but two conceptions of the status of dentistry were possible, viz.: that it was either a branch of medicine, or else a separate profession; and believing that its close relationship with medicine called for the future development of dentistry in conformity therewith, the Trustees took action resulting in the creation of the Department of Dentistry of the University of Pennsylvania. The plan of instruction was so arranged that the branches common to both medicine and dentistry were taught concurrently by teachers who held corresponding chairs in both medical and dental faculties; while the strictly dental teaching was provided for by the creation of chairs whose incumbents were specially qualified for giving instruction in their respective branches. This arrangement is in strict accordance with the university idea, by which the teaching of allied branches is centralized in different departments. It does not imply that the Department of Dentistry is a branch of the Department of Medicine; for, as a matter of fact, both are distinct Departments of the University.

It is worthy of note that the Department of Dentistry is actually, as well as in name, a Department of the University. Its position as a recognized member of the University family confers upon its students certain advantages pertaining to that relationship. Its students enjoy in common with all other students of the University the privileges and social relationships pertaining to the student life of the whole body. Prominent among these features is membership in the Houston Club, an organization governed by students and domiciled in a club house which in its fittings and appointments is second to no other club house in Philadelphia. Its students have also the use of the Dormitories, and are admitted to all of the athletic features of the University; while, with reasonable restrictions, the opportunity is afforded them to pursue such allied lines of study as in the judgment of the authorities may tend to add strength and fullness to the dental educational equipment.

The practical advantages that accrue to the dental student by such a broad policy are at once manifest. Its effect upon the status of the dental practitioner must be recognized when it is considered that during his student life, his association with the students of the other Departments of the University is upon a basis of equality in all that concerns the student life of the institution. The influence of this feature in bringing about a close relationship between dental and medical students develops a mutual respect and recognition, which in their career as practitioners is of the utmost importance.

EQUIPMENT.

The arrangement of the interior of Dental Hall is such that facilities are provided for the thorough education of the student in every important detail of his professional work. The clinical operating-room occupies one entire floor of the main building, giving a floor space 180 by 50 feet, furnished with one hundred latest pattern Wilkerson operating chairs, each provided with a fountain cuspidor, with running water attached, and attachment for the Fisk saliva ejector. Each chair is provided with a bracket arm and table for holding instruments, besides a separate table for the instrument case. Electric service is provided for each chair. A complete locker system in connection with the operative clinic furnishes means for the storage of instruments when not in use. In the fitting up of the operating-room, the aim has been to make the appointments as nearly as possible like those of a first-class private office, so that from the beginning of his course the student is familiarized with the conditions he will meet in actual practice.

One large general laboratory for prosthetic work is provided, and separate departments for crown-and-bridge work, orthodontia technics, prosthetic technics, operative technics, metallurgical work, vulcanizing and modeling; also special clinic-rooms and laboratories. Ample arrangements are provided for the convenience and comfort of the students in the care of instruments, tools, etc. There are also hat and coat rooms, lavatories, etc., a bicycle-room, laundry, store-rooms, and living apartments of the janitor; and an assembly-room for the exclusive use and recreation of the students when not on duty. The laboratories are fitted with the most approved appliances for work and instruction in the several departments of dentistry. Compressed air is supplied to the laboratory tables for melting and soldering operations, as well as for metallurgical work. The laboratory lathes are driven by electric motor, and no feature which could add to the facilities for thorough and accurate work has been omitted.

The lecture amphitheatre will comfortably seat 550. It joins the main building by a corridor, and in relation with it are arranged the dental museum and library.

As the laboratory, or manual-training, method forms a prominent and necessary adjunct to didactic teaching, facilities for carrying out the technic system of instruction are provided in connection with each subject to which the system is applicable.

ADMISSION.

N. B.—*By a ruling of the National Association of Dental Faculties, at its meeting held in August, 1901, at Milwaukee, Wis., the course of instruction for the attainment of the degree of Doctor of Dental Surgery was increased to four years. This ruling went into effect with the beginning of the current session of 1903-04.*

Special attention is called to the rule adopted by the National Association of Dental Faculties, August, 1896, requiring all applicants for matriculation to be present and enter their names *not later than the tenth of October.*

Candidates for admission will not be permitted to matriculate for any session other than that immediately succeeding the date of matriculation. No candidate will be allowed to matriculate for more than one session at a time.

PRELIMINARY EDUCATIONAL REQUIREMENTS.

The educational standard for admission into this Department is a three years' completed course in an approved high school, or its equivalent.

To assist in deciding whether a candidate has or has not the necessary educational requirements for entrance to this Department, and to prevent uncertainty and delay in replying to communications from applicants for matriculation, the following regulations have been adopted for the session of 1904-05:

'A. For matriculation in the Freshman Class without examination, the candidate must present a diploma of graduation from a literary or scientific college, a state normal school, a diploma of an approved high school having a three years' course; or a certificate showing satisfactory completion of three years' work of a high school having a four years' course, or a certificate from a preparatory or other school showing an equivalent education, and such certificate must be signed by the principal of the school issuing it, stating the studies pursued by the applicant, the extent to which, in each case, they have been covered, and the grade attained in each.

B. In lieu of such diploma or certificate, the applicant will be required to pass a matriculate examination, which shall be the equivalent of that forming the basis of the certificate of required preliminary education, as follows:

LANGUAGE.

ENGLISH.—No candidate will be accepted in English whose work is notably defective in spelling, punctuation, idiom or division into paragraphs.

A. (1) Grammar and Analysis (as in Abbott's *How to Parse*, or Murray's *Advanced Lessons in English Composition, Analysis, and Grammar*). (2) The writing of several paragraphs, correct in spelling, punctuation, grammar, and expression, written on subjects taken from the following works, a general knowledge of which is required. For 1904 and 1905:

Shakespeare's *The Merchant of Venice* and *Julius Cæsar*; *The Sir Roger de Coverley Papers* in *The Spectator*; Goldsmith's *The Vicar of Wakefield*; Scott's *Ivanhoe*; Coleridge's *The Rime of the Ancient Mariner*; Carlyle's *Essay on Burns*; Tennyson's *The Princess*; Lowell's *The Vision of Sir Launfal*; George Eliot's *Silas Marner*.

B. A special knowledge of the subject-matter, form and structure of the following works: Shakespeare's *Macbeth*; Milton's *Lycidas*, *Comus*, *L'Allegro* and *Il Penseroso*; Burke's *Speech on Conciliation with America*; Macaulay's *Essays on Milton and Addison*.

LATIN.—(1) A thorough knowledge of elementary grammar, as in Bennett's *Latin Grammar*.

(2) Cæsar (any standard edition):

Or an equivalent course in German, French or Spanish.

HISTORY.

A. American history, with the elements of civil government. This will include colonial history, with a view to the origin and development of our institutions; and the period of discovery and early settlement, so as to set forth the relations of peoples in America and the meaning of the struggle for mastery; geographical knowledge involved; the general plan and important provisions of the Constitution. As in McMaster, or Fiske (school edition).

B. General history,—including Greek, Roman and English history; leading events. As in Meyer, or Anderson.

NOTE.—The entrance examination for the session of 1904-1905 will be held in Roberts Vaux School-building, Wood street below Twelfth, on Tuesday, September 27, 1904, at 9 A. M.

MATHEMATICS.

A. Algebra.—Fundamental operations; factors; common divisors and multiples; fractions; equations of the first degree with one or more unknown quantities; quadratic equations; the binomial theorem. As in Brooks, or Wentworth (Shorter Course).

B. Plane Geometry,—including the solution of simple original exercises and numerical problems. As in Wentworth, or Phillips and Fisher.

SCIENCE.

Physics.—As in Carhart and Chute, or Gage's *Elements of Physics*.

Chemistry.—As in Remsen's *Elementary Course in Chemistry*, or Arey's *Elementary Chemistry* will be accepted in lieu of Physics.

Other text-books than those mentioned may be used at the pleasure of teacher or student, provided they cover the subjects to the extent indicated.

N. B.—Official certification of work done in other subjects of a standard equivalent to three years' work in an approved high school, will be received and duly credited.

An applicant whose credentials do not fully meet the requirements outlined above, or who does not pass the entrance examinations with a percentage of 70 in every subject, may be admitted on condition that he make up the required work in any branch or branches (not exceeding two) to the extent required.

Matriculates who are conditioned in any branch or branches must pass a satisfactory examination in such branch or branches before being permitted to take the final Freshman examination.

Registration cards and permits for the entrance examination must first be obtained from the office of the Dean of the Department of Dentistry in Dental Hall, Thirty-third and Locust streets, Philadelphia.

ADMISSION TO ADVANCED STANDING.*

Students possessing the requisite preliminary education, and who have attended one full term in a dental school recognized by this University, will be admitted to the second year, subject to the rules governing admission to advanced standing.

* All applicants for advanced standing must pass the examinations of the years they desire to omit, or furnish proof that they have passed *equivalent* examinations in some recognized dental or medical school.

Graduates of a recognized medical school will be admitted to the Second-year Dental Class without examination.

Applicants for advanced standing, who have not had instruction in Practical Histology and Practical Chemistry equivalent to that required in this department, will be permitted to make up such deficiency by taking special courses, for which an extra fee of fifteen dollars is charged for each branch. Classes for special courses in these branches are organized during the first week in September for the benefit of those desiring to take the laboratory work before the work of the regular session.

Students who have credit for the completed work of two or more terms in a recognized dental school, and who possess the requisite preliminary educational qualifications, are eligible for admission to the third year, subject to the rules governing admission to advanced standing.

Graduates in foreign dental schools are required to conform to the rules governing advanced standing, and to the ruling of the National Association of Dental Faculties that their credentials must receive the approval of the Advisory Board for their country before they can be accepted.

SCHOLARSHIPS.

1. UNIVERSITY SCHOLARSHIPS.—The Trustees have established two University Scholarships in Dentistry, the award of which is based upon the result of a competitive examination equivalent to that demanded for admission to the technical courses in the College. They are not awarded for less than the entire course.

Examinations for these scholarships are held on the same day with those fixed for entrance to the College (Friday, September 23, 1904), and are open to all applicants otherwise eligible for admission to the Department of Dentistry. Circulars setting forth in detail the plan of the scholarship examination may be had upon application to the Dean of the Department of Dentistry.

A registration fee of five dollars is required of all candidates for scholarship and entrance examinations, and is not returnable in case of failure to pass.

2. PUBLIC SCHOOL PRIZE SCHOLARSHIPS.—Under an agreement with the city of Philadelphia, fifty free scholarships exist in the University for the benefit of graduates of the public schools. The candidates for these scholarships are examined by the Board of Public Education, and award is made to those who reach the highest grade, as vacancies occur from year to year.

ARRANGEMENT OF SESSION.

The academic year consists of one session beginning on the last Friday in September, and ending at Commencement, on the third Wednesday in June. The course of instruction is graded.

Laboratory instruction, not only in all of the practical dental branches, but also in Practical Chemistry, Metallurgy, Histology, Bacteriology, Physiology and Osteology, forms a prominent feature of the course.

The session of 1904-05 will begin on Friday, September 30, 1904, and will end on Wednesday, June 21, 1905.

MID-TERM EXAMINATIONS.

The arrangement of subjects constituting the curriculum of the first, second, and third years as specified here and on pp. 24 and 25 *et seq.*, is provisional only, and subject to change before the opening of the session of 1904-05. The subjects to constitute the fourth-year session will be duly announced later.

In the first-year course a mid-term examination is held about February 1 in Chemistry, History and Elementary Anatomy.

In the second-year course, at the same date, a mid-term examination is held in Elementary Physiology and Bacteriology.

In the third-year course a mid-term examination is held in Metallurgy.

RULES GOVERNING MID-TERM EXAMINATIONS.

1. NON-PRESENTATION AND FAILURES.

A student who has not undergone examination, or who has failed to attain a mark of 50 in any examination, may be re-examined:

- (a) At the first re-examination about March 1; or, failing then
- (b) At the second re-examination about one week prior to the final examinations of the academic year in May.

2. FAILURE TO MAKE A GENERAL AVERAGE OF 60.

A student having passed all the examinations, but failing to attain a general average of 60, may avail himself of the privileges of the re-examinations at the times designated in paragraph 1, in all of the subjects in which a mark of less than 60 was attained.

3. ELIGIBILITY FOR FINAL EXAMINATIONS IN MAY.

All the mid-year examinations must be passed before the candidate becomes eligible for the final examinations for the academic year, held in May.

4. REPETITION OF THE STUDIES OF THE YEAR.

The general rules governing the repetition of the studies of any year shall apply to those students who failed to pass or to attain the required general average, or who were ineligible to appear at the final examinations of the academic year, held in May.

RULES GOVERNING TERM EXAMINATIONS.**FIRST AND SECOND YEAR STUDENTS.**

1. The examination marks of this Department are based on a scale of 100. Each student must obtain a general average of 60 to pass the examinations of the year. 50 on a single branch will entitle him to average; less than 50 constitutes a failure in that branch.

2. Students who have failed to pass in any or all of the branches are given an opportunity for a second examination, before the opening of the next regular session, on the stated day in September designated for re-examinations in the official calendar in this Catalogue; but if the student fail to appear, or if his general average be less than 60, he shall repeat the studies of the year except those in which he received a grade of not less than 70.

3. A student may be permitted to matriculate in the succeeding year, if he has successfully passed in all but one branch, on condition that the one in which he has been found deficient must be passed on or about November 1 of the year in which he has been matriculated. Failing at the November examination to pass the branch in which he is conditioned, the student will be required to repeat the work of the year as provided in Rule 2. This rule applies to laboratory and clinical requirements as well as to didactic work.

4. Students who have failed to complete the work of any year, or who are obliged to repeat, will be charged the regular fee.

5. No student will be eligible for examination if any portion of his fees remains unpaid.

EXAMINATION FOR GRADUATION.

1. The examination marks shall be upon a scale of 100.

2. Each candidate must attain at least 50 in any single branch, and have a general average of 60, before he can be recommended for graduation.

3. Candidates who attain a general average of at least 90 shall be considered to have gained Honors of the first class, and will receive Honorable Mention.

4. The graduation average shall be based on the examination marks of the whole curriculum.

5. Examinations are held immediately after the completion of the lecture courses.

No student can be examined before that time except by consent of the Faculty.

GRADUATION.

At the close of the course, a student who has fulfilled all requirements satisfactorily receives the degree of *Doctor of Dental Surgery* (D. D. S.), under the following regulations:

I. He must be of age and of good moral character.

II. He must have passed a satisfactory examination in all the branches of the curriculum; must have attended the practical instruction and performed the required practical work in all departments; and his last year of instruction must have been at the Department of Dentistry of this University.

III. He must have dissected at least two parts; must have performed thoroughly, and to the satisfaction of the Professor of Operative Dentistry, all the usual dental operations; must have undertaken at least one artificial case, and brought it completed, with the patient, to the Professor of Prosthetic Dentistry, thirty days before the close of the term; and must have prepared for presentation to the Professor of Prosthetic Dentistry, before the first of May, a specimen case to be deposited in the University collection. The required operations, as well as the work on the artificial case, must have been performed in Dental Hall.

IV. After receiving notice of having successfully passed the final examination, he must enter his name on the Register of Candidates for the Degree.

V. He must be present at Commencement, unless excused by the Dean of the Faculty.

TEXT-BOOKS AND WORKS OF REFERENCE.*

Text-Books.

Works of Reference.

Operative Dentistry:

Kirk, The American Text-
Book of Operative Dentis-
try.

Johnson, Principles and Practice
of Filling Teeth.
Farrar, Irregularities of the Teeth
and their Correction.

* In all cases the latest editions should be obtained

Text-Books.

Works of Reference.

Prosthetic Dentistry and Metallurgy:

Essig, The American Text-
Book of Prosthetic Dentis-
try.

Essig, Dental Metallurgy.

Kingsley, Oral Deformities.

Dental Pathology and Therapeutics:

Burchard, Dental Pathology,
Therapeutics and Pharma-
cology.

Materia Medica:

Gorgas, Dental Medicine.

H. C. Wood, Therapeutics.

Wood & Bache, United States
Dispensatory.

Orthodontia:

Angle, Treatment of Maloc-
clusion of the Teeth and
Fractures of the Maxillæ.

Chemistry:

Richter, Inorganic Chemis-
try.

Mitchell, Dental Chemistry.

Medicus, Qualitative Analy-
sis. (5th edition.)

Histology:

Piersol, Normal Histology.

Anatomy:

Gray, Human Anatomy.
Black, Dental Anatomy.

Tomes, Dental Anatomy.

Dissection Manual:

Holmes, Outlines of Anat-
omy.

Physiology:

American Text-Book of Phy-
siology.

Text-Books.

Works of Reference.

Oral Surgery:

Marshall, Injuries and Surgical Diseases of the Face, Mouth and Jaws.

Cryer, Studies of the Internal Anatomy of the Face.

Bacteriology:

Abbott, Principles of Bacteriology.

Miller, Micro-Organisms of the Human Mouth.

Dictionary:

Gould, Student's Medical Dictionary.

FIRST-YEAR CLASS.—SESSION 1903-1904.***Order of Instruction before February 1.**

<i>Hour.</i>	<i>Monday.</i>	<i>Tuesday.</i>	<i>Wednesday.</i>	<i>Thursday.</i>	<i>Friday.</i>	<i>Saturday.</i>
9 A. M.	Swan. Osteology and Syndesmology.	Swan. Osteology and Syndesmology.			Turner. Prosthetic Dentistry.	
10 A. M.	Marshall. Chemistry.	Marshall. Chemistry.			Class divided into Sections for Instruction in Prosthetic and Operative Techniques.	Dental Anatomy and Modeling tooth forms.
11 A. M.	Prosthetic and Operative Techniques.	Prosthetic and Operative Techniques.				
1.30 to 3. 45 P. M.	Class divide 1 into Sections for Pract. Work in Chemistry and Histology.	Class divided into Sections for Pract. Work in Chemistry and Histology.	Class divided into Sections for Pract. Work in Chemistry and Histology.	Class divided into Sections for Pract. Work in Chemistry and Histology.	Prosthetic and Operative Techniques.	
4 P. M.	Piersol. Anatomy.	Piersol. Anatomy.	Marshall. Chemistry.	Piersol. Anatomy.	Piersol. Anatomy.	
5 P. M.	Jarvis. Anatomy Recitation.	Jarvis. Anatomy Recitation.		Jarvis. Anatomy Recitation.		

See SPECIAL ROSTER for Arrangement of Sections in Practical Work.

* Rosters are subject to rearrangement at the beginning of each academic year.

SECOND-YEAR CLASS.—SESSION 1903-1904.
Order of Instruction before February 1.

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9 A. M.	Gritman. Prosthetic Techniques.		Abbott. Bacteriology.			Operative Clinic.
10 A. M.	Section Work in Prosthetic Dentistry, or Crown and Bridge Work, or Operative Clinic.					
11 A. M.						
12 M.		Kirk. Clinical Dentistry.	Cryer. Oral Surgery.	Physiology Conference.	Physiology Conference.	Cryer. Oral Surgery.
1.30 to 3.45 P. M.	Section Work. Dissecting, Bacteriology, or Physiology Demonstrat n.	Section Work. Dissecting, Bacteriology, or Physiology Demonstrat n.	Section Work. Dissecting, Bacteriology, or Operative Clinic.	Section Work. Dissecting, Bacteriology, or Operative Clinic.	Section Work. Dissecting, Bacteriology, or Operative Clinic.	
4 P. M.	Reichert. Physiology.	Reichert. Physiology.	Truman. Materia Medica.	Reichert. Physiology.	Reichert. Physiology.	
5 P. M.	Turner. Prosthetic Dentistry.	Darby. Operative Dentistry.	Turner. Prosthetic Dentistry.	Darby. Operative Dentistry.	Truman. Dental Pathology and Therapeutics.	

See SPECIAL ROSTER for Sections in Practical Work.
One section of the class dissects daily from 1.30 to 3.45 P. M.

THIRD-YEAR CLASS.—SESSION 1903-1904.
Order of Instruction before February 1.

Hour.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9 A. M.	Operative or Prosthetic Clinical Pract.	Operative Prosthetic Clinical Pract.		Gritman. Prosthetic Technics.	Operative or Prosthetic Clinical Pract.	
10 A. M.	Ceramics.	Ceramics.	Operative or Prosthetic Clinical Pract.	Operative or Prosthetic Clinical Pract.	Ceramics.	Operative Clinic.
11 A. M.	Crown and Bridge Work.	Crown and Bridge Work.		Crown and Bridge Work.		
12 M.		Kirk. Clinical Dentistry.	Cryer. Oral Surgery.			Cryer. Oral Surgery.
1.30 to 5 P. M.	Operative Clinic, Orthodontia, Inlay Work, Practical Metallurgy.	Operative Clinic, Orthodontia, Inlay Work, Practical Metallurgy.	Operative Clinic, Orthodontia, Inlay Work, Practical Metallurgy.	Operative Clinic, Orthodontia, Inlay Work, Practical Metallurgy.	Operative Clinic, Orthodontia, Inlay Work.	
5 P. M.	Turner. Prosthetic Dentistry.	Darby. Operative Dentistry.	Turner. Prosthetic Dentistry.	Darby. Operative Dentistry.	Truman. Dental Pathology and Therapeutics.	

Medical and Surgical Clinics at the University Hospital are held from 12 M. to 2 P. M., on Wednesdays and Saturdays, and are open to the Second and Third-year Classes. These are in addition to the dental clinics at the Philadelphia Hospital, on Saturdays at 12 o'clock, and to the Oral Surgical Clinics as noted on the roster.

OPERATING-ROOM, LABORATORIES, ETC.

The operative clinic room and laboratories are spacious and well equipped, affording ample facilities for the practical training of the student.

The dissecting-room is large, well lighted, thoroughly ventilated, and furnished with ample material for the successful prosecution of anatomical studies.

GRADATION OF THE COURSE.

In order to facilitate work in the practical branches, and to economize the student's time, the regular session is so arranged that students during the first year are required to devote the time equally to dental, histological and chemical laboratory work.

During the second and third years, the student has practically the entire forenoon of each day for dental work. Thus ample opportunity is afforded for practice in Operative and Prosthetic Dentistry. In the latter branches, the students are divided into sections, devoting the time not otherwise engaged to practice in the operating-rooms.

This plan of gradation enables the First-year student to present himself for examination in the following branches: Chemistry, Histology and Anatomy, including Osteology and Myology, and on Progress in Mechanical Dentistry and Materia Medica. The Second-year student will be examined on Materia Medica, Bacteriology, Applied Anatomy and Physiology, and on Progress in Operative and Prosthetic Dentistry. Such an arrangement is economical not only in point of time, but also in facilitating a student's acquirement of knowledge in the remaining branches.

OUTLINE OF THE COURSE.*

FIRST YEAR.

Students of the First-year Class will be required to attend instruction in and pass examinations upon the following branches:

- i. Chemistry. Three lectures a week. Five hours laboratory.

* See first paragraph under Mid-Term Examinations, p. 370.

2. Anatomy. Four lectures a week. One-half the required work in dissecting is done during this year.
3. Histology. Five hours laboratory a week.
4. Osteology. Two lectures a week.
5. Materia Medica. One lecture a week.
6. Students of the First-year Class will be trained in Operative and Prosthetic Technics during hours not otherwise occupied.
7. They will, in addition to the subjects named, attend lectures on Prosthetic Dentistry. One hour a week.

SECOND YEAR.

1. Students of the Second-year Class will attend lectures on Materia Medica, Physiology, Operative and Prosthetic Dentistry and Metallurgy, Dental Pathology and Therapeutics, Clinical Dentistry, Bacteriology, Applied Anatomy and Oral Surgery. Work in Practical Anatomy (dissecting) is finished during this year.
2. They will pursue Operative and Mechanical Work, with the privilege of the operating-room and appliances during the morning and afternoon clinics.
3. The final examinations of the second year will be upon Materia Medica, Physiology, Bacteriology, Applied Anatomy and Progress in Operative and Prosthetic Dentistry.

THIRD YEAR.

1. Students of the Third-year Class will continue the practical work in Operative Dentistry, Prosthetic Dentistry and Dental Metallurgy, and the lectures on these subjects, together with Dental Pathology and Therapeutics, and Clinical Dentistry and Oral Surgery.
2. At the close of the term they will be required to pass examinations in these branches.

FOURTH YEAR.

Due announcement of the fourth-year curriculum will be made in later publications.

COURSE OF INSTRUCTION.

The lectures on OPERATIVE DENTISTRY AND DENTAL HISTOLOGY embrace the comparative anatomy of the teeth; the functions and microscopical peculiarities of the dental organs; the development

of teeth and their component tissues; a full description of the materials and instruments used in Operative Dentistry; a thorough elucidation of all dental operations, such as filling, extracting and regulating; the pathological relations of the teeth to the other parts of the system; and a minute description of all diseases related to dental surgery or of interest to the dentist. The methods taught are demonstrated in clinics.

The course of instruction in PROSTHETIC DENTISTRY is a graded one, and is arranged to embody in the teaching of the first year the fundamental principles of prosthetic work, including the properties of the materials used for prosthetic purposes and the various mechanical processes involved in their utilization; in the second year a more specific and extended instruction in these procedures is given, and the finger-skill necessary in the usual mechanical operations is developed; while in the third year the student is instructed in the choice of means for attaining a given end, and the selection of this means in accordance with the requirements of specific cases. During the third year attention is given to the more highly specialized branches of Prosthetic Dentistry under qualified demonstrators.

Instruction in Prosthetic Dentistry is accomplished by didactic lectures illustrated by means of heroic models, lantern slides, and blackboard drawing; by graded technic courses, which include in each year illustration of the lecture topics by actual demonstration of the processes before the class, and the manufacture of the appliances so illustrated by the class, divided into small sections for systematic work; by specimens on exhibition in the general laboratory illustrative of successive stages in the technic requirements; and by abundant clinical practice.

The lecture course will include, in addition to dental prosthesis, the replacement of tissues about the mouth not strictly dental, and the manufacture of appliances for the remedy of palatal defects.

The instruction in ORTHODONTIA will be by means of lectures, quizzes, a technic course and clinical practice; and attention will be specially paid to the treatment of cases in the light of their etiology.

The lectures on CHEMISTRY embrace the study of chemical physics and principles of chemical philosophy, together with a detailed consideration of the principal elementary substances and their compounds; and of the fundamental principles of Organic Chemistry, including the classification of organic compounds, and the special study of typical members of the different classes. Special attention is also given to the laws of chemical affinity, and the conditions under which they are modified, especially as they relate to the preparation of mixtures and prescriptions.

The course in PRACTICAL CHEMISTRY in the laboratory includes exercises in chemical manipulation; the study of the chemical properties of the principal metals; the reactions of acids and their combinations; and the general principles of qualitative analysis, especially as they relate to the detection and separation of the metals and compounds of interest to practitioners of Dentistry. Each student is provided with a separate table and apparatus, and is required to perform all the usual chemical manipulations under the directions of demonstrators, as well as to exhibit by written formulæ all reactions involved in his tests.

HUMAN ANATOMY is taught in its relations to all the branches of medical science, including Dentistry. The lectures are illustrated by fresh dissections of the human body, and by a rich museum of anatomical specimens, well-executed models and drawings.

In addition to the lectures and demonstrations by the Professor of Anatomy, a course of demonstrations in Applied Anatomy is given to the students of the second year. The course consists of a drill by recitations and demonstrations of dissections upon those anatomical regions with which the dental and oral surgeon is especially concerned. Practical instruction in general and special HISTOLOGY will be given in the histological laboratory to the students of the first year, the class being divided into sections. The laboratory is furnished with excellent microscopes, and all apparatus necessary to enable the student to become familiar with the most approved methods of microscopical technology and with the minute structure of all the tissues and organs. Special facilities are afforded for original research; for this purpose the laboratory is open throughout the year, except during July and August.

The OSTEO-SYNDESMOLOGICAL LABORATORY is under the supervision of the Professor of Anatomy and Demonstrator of Osteology. In this Laboratory, the first-year student is required to make himself familiar with the skeleton and the articulations as a part of his instruction in practical anatomy.

The course in PHYSIOLOGY includes thorough instruction on the subject of animal physiology, with special reference to the physiology of Man.

The lectures on DENTAL PATHOLOGY include such portions of general pathology as have a bearing upon the special subjects taught.

Dentition and its possible pathological results receive careful attention, followed by a detailed consideration of all the diseases to which the teeth and surrounding parts are liable; the normal and abnormal character of the oral secretions, and the direct and remote

relations that the pathological conditions of the mouth sustain to other portions of the system.

The treatment required under each head is explained, and the recognized processes necessary to secure a return to normal conditions are minutely detailed.

MATERIA MEDICA is taught with special reference to the character and value of those remedies which have any bearing upon dental therapeutics.

BACTERIOLOGY.—The study of **BACTERIOLOGY** is an obligatory part of the second-year curriculum. The growing importance of this subject in relation to dental pathology and therapeutics has made necessary certain modifications in the technique of nearly all dental operations. A clear understanding of the practical bearing of bacterial life-processes has become a necessity for intelligent and successful dental practice, just as it has similarly for surgical practice.

The course is so arranged with respect to the requirements of the dental practitioner that he will afterwards be able not only to apply correctly the most approved methods for preventing and combating bacterial action, and to develop an efficient system of antiseptic technique in connection with his work; but he will also be trained in the several methods that will enable him to study the bacterial factor which is the exciter of pathological conditions in special cases arising in his practice.

The instruction in **BACTERIOLOGY**, which is under the direction of Dr. A. C. ABBOTT, Professor of Bacteriology and Director of the Laboratory of Hygiene, is principally practical and embraces full laboratory instruction, covering the following subjects:

1. Apparatus employed—sterilizers, incubators, pressure regulators, thermostats, etc.
2. Culture media, methods of preparation, sterilization methods.
3. Microscopic characteristics of cultures of bacteria in general and of special forms.
4. Methods of obtaining, from mixtures of different bacteria, individual species in pure cultures.
5. Microscopic technique. Use and care of instruments, staining from cultures, section cutting and staining and mounting of tissues.
6. Pathogenic bacteria, isolation, identification and inoculation.
7. Disinfection of instruments, appliances, etc., thermal and chemical, methods and apparatus, modes of testing efficiency.

8. Antisepsis and asepsis in dental surgery, preparation of dressings, instruments, operator and assistants and of patients.

Following this, the special study of Bacteriology in relation to dental pathological conditions will receive full consideration and elaboration. The classification, life-history, modus of infection and pathological significance of all bacterial forms having distinct dental importance will be studied in detail.

The lectures on these subjects are appropriately illustrated, and accompanied by suitable demonstrations whenever possible. The Laboratory of Hygiene has a thoroughly equipped department for practical instruction in Bacteriology, including an ample number of high-grade microscopes for the special use of dental students in the study of this branch. Examination upon the subject will be a prerequisite to the obtaining of the dental degree.

CLINICAL DENTISTRY.—The instruction in this department has for its object the study of the whole range of dental operations as they arise in practice, especially from the clinical point of view.

The valuable clinical material which is afforded by the large Dental Infirmary service of the University is utilized as the basis of the instruction given, both didactically and by demonstration. Cases are continually presenting for treatment in the Infirmary which furnish important points for study, and whenever these form suitable subjects for demonstration a study of the case is made for the benefit of the class. The student is thus brought into close contact with a great variety of dental and oral disorders, and is made familiar with the methods of diagnosis and the etiology and treatment of the conditions with the actual cases before him.

The teaching in this department includes, besides the foregoing, a study of the professional relations of the dentist to his patients, involving matters of deportment, habits of personal cleanliness, etc ; in short, all of those factors of professional conduct and bearing which, taken altogether, determine the measure of his professional success.

In the lectures on CLINICAL DENTISTRY, all of the latest developments in operative procedures, so far as they may have value from the clinical standpoint, are presented and critically considered.

ORAL SURGERY is a specialty which is a distinct outgrowth from Dentistry. As the work of the dentist came to include operations upon the surrounding tissues, as well as upon the teeth themselves, the adoption of surgical methods and more thorough training in the principles and practice of surgery became necessary. The addi-

tion of instruction in this branch to the dental curriculum includes thorough instruction in the surgical and pathological anatomy of the mouth, jaws, and associate parts; the etiology, diagnosis and treatment of lesions of these parts; the most advanced methods of operative technique, including the use of the surgical engine, surgical anesthesia, asepsis and antisepsis, and after-treatment of the case.

The instruction is both didactic and clinical, and students are encouraged to study and personally treat cases under the supervision of the Professor of Oral Surgery and his assistants.

Special facilities for the performance of oral surgical operations and for the care of patients are provided in the University Hospital and the Philadelphia Hospital.

CLINICAL PRACTICE.

Seven hours daily (except on Saturdays) are spent in actual practice under the supervision of the demonstrators; on Saturdays from 9 A. M. to 12 M. Every student is required to provide his own instruments, except those for extracting. He is expected to keep them in perfect order, and will be furnished with a place in which they can be locked when not in use.

INFIRMARY AND LABORATORIES.

The Infirmary and Laboratories are open to the students for practice every day during the week, except on Saturday afternoons, which are reserved for clinics that may be given by members of the Faculty or instructors.

The Infirmary and Laboratories are open throughout the year, except during July and August.

MUSEUM AND CABINETS.

The WISTAR AND HORNER MUSEUM, founded nearly one hundred years ago, and annually augmented, is unequaled in the United States for the number and variety of its specimens of the normal and the morbid anatomy of the human body. It also contains a large number of preparations in Comparative Anatomy; a rich collection relating to Dentistry, such as the different stages of dentition, abnormal conditions of the teeth, mandibles of the lower animals, etc.; and an extensive collection of models. This collection is deposited in the building opposite Medical Hall, erected by General Isaac J. Wistar, and called the WISTAR INSTITUTE OF

ANATOMY AND BIOLOGY. The Museum is open every week-day, excepting holidays, from 9 A. M. to 3.30 P. M., throughout the sessions. The matriculation fee in the Department of Dentistry confers admission to the Museum.

TUITION FEES AND EXPENSES.*

The tuition fee is \$100 per annum and is due on the last Friday of September, which is the first day of the term. If a division of payment is desired, one-half is to be paid on or before October 1, and the remaining half on or before February 1, in accordance with the University Rules governing Payments. Remittances should be for the exact amount due, and should be in cash, or by bank draft, certified cheque, or postal money order. All fees are payable at the Bursar's office, Room 102, College Hall.

Under no circumstances are any changes made in the established fees.

Students of the Department of Dentistry may attend, without additional charge, the lectures and recitations in any other department of the University. This privilege may be obtained only by the concurrent approval, in writing, of the respective Deans.

Each student is required to make a deposit of five dollars with the Bursar of the University to cover breakage in the laboratories or damage to University property. Any balance remaining is returned upon graduation or withdrawal of the student from the University.

Instruments for the first year can be procured at from \$60 to \$75. A dental engine will be needed for the second year, costing from \$40 to \$60. Additional instruments will be required for the second-year and third-year work. These instruments may be utilized in general practice.

Rooms may be had in the University Dormitories (see Index) or in houses near the University, and board may be had in the University Dining Hall or in private boarding houses. In any case the cost for board and lodging will be from \$5.00 a week upward.

Dental Hall is provided with locker facilities for the storage of instruments, apparel, etc. It is to be understood, however, that the lockers are provided solely as an accommodation, and that in renting them to the students the Department assumes no responsibility whatever with respect to the care or loss of the contents.

* For Estimate of Expenses, see pages 35 and 3.

First Year.

Matriculation Fee (paid once only)	\$ 5 00
Tuition Fee	100 00
Fee for Dissection	5 00
Use of Dissecting Material (one part)	1 50
Breakage Deposit	5 00

Second Year.

Tuition Fee	\$100 00
Fee for Dissection	5 00
Use of Dissecting Material (one part)	1 50

Third Year.

Tuition Fee	\$100 00
*Graduation Fee	30 00

Further information may be obtained from

EDWARD C. KIRK, Dean.

The Dean's office is in Room 39, Dental Hall, Thirty-third and Locust streets. Office hours: 9 A. M. to 1 P. M., daily.

The total number of new matriculates for the present session, including those admitted to advanced standing, is 121.

Since the foundation of the department, the total number of graduates has been 1,801.

The subjoined reports give some conception of the character and mass of work performed in the Operative and Prosthetic Departments; but the amount of costly material and careful attention necessary for the insertion of 7,753 gold fillings can be appreciated only by the experienced operator.

The number of patients (14,315) exhibits the extent of the Dental Infirmary service to a large class of persons of limited means.

OPERATIVE DEPARTMENT.

Gold fillings	7.753
Tin fillings	4,444
Cement fillings	1,661
Amalgam fillings	2,439

* Under the four-year course the graduation fee will be due and payable at the end of the fourth year.

Gutta-percha fillings	2,387
Treatment pulp canals	1,772
Canal fillings	1,485
Pulpitis	135
Pulps capped	241
Pulps devitalized	889
Pulps extracted	955
Pericementitis	174
Alveolar abscess	294
Inflammation of gums	161
Pyorrhœa alveolaris	203
Salivary calculus	572
Teeth and roots extracted	4,055
<hr/>	
Total	29,620

Seventy ounces (5 lbs. 12 ozs.) of gold were used for filling, exclusive of that used for plate and crown work in the Laboratory.

PROSTHETIC DEPARTMENT.

Full Dentures (Clinical, 167—Technic, 870)	1,037
Partial Dentures (Clinical, 130—Technic, 882)	1,012
Artificial Crown Work (Clinical, 263—Technic, 1,218)	1,481
Repair cases	171
Bridge Work—Clinical	54
Continuous Gum Bridge	116
Bridge Work—Technic	432
Interdental Splints	117
Regulating Plates and Appliances	137
<hr/>	
Total	4,557

ESTIMATES OF EXPENSES.

FIRST YEAR.

General Tuition Ticket	\$105 00
Dissecting Ticket	5 00
Use of Dissecting Material (one part)	1 50
Breakage Deposit	5 00
Three quizzes (optional)	21 00
Books (about)	30 00
Instruments (about)	70 00

DEPARTMENT OF DENTISTRY.

Deposit for lockers	\$ 2 00
Materials for Histological and Prosthetic Work	6 00
Board, 35 weeks at \$5.00	175 00
Washing, 35 weeks at 75 cents.....	26 25
Total, first year	\$446 75

SECOND YEAR.

General Tuition Ticket	\$100 00
Dissecting Ticket	5 00
Use of Dissecting Material (one part)	1 50
Dental Engine, instrument (about)	50 00
Additional instruments (about)	80 00
Two quizzes (optional)	14 00
Books (about)	15 00
Deposit for lockers	2 00
Material for Prosthetic Technic Work	2 00
Board, 35 weeks at \$5.00	175 00
Washing, 35 weeks at 75 cents	26 25
Total, second year	\$470 75

THIRD YEAR.

General Tuition Ticket	\$100 00
Graduation Fee	30 00
Quiz Classes (optional)	20 00
Class expenses; rental of Cap, Gown and Hood	5 00
Instruments (about)	20 00
Deposit for lockers	2 00
Material for Prosthetic Technic Work	2 00
Material for Ceramic Work	3 50
Board, 37 weeks at \$5.00	185 00
Washing, 37 weeks at 75 cents	27 75
Total, third year	\$395 25

STUDENTS.

THIRD-YEAR CLASS.

Name.	Residence.	City Address.
Adams, Frank Lawrence,	Utica, N. Y.,	2609 Lombard St.
Albertson, Frank,	Worcester, Mass.,	3606 Locust St.
Allen, Walter Bowne,	Trenton, N. J.,	[218 E. Hanover St.]
Andrew, Frederick Franklin,	Louisville, N. Y.,	206 S. 36th St.
Bacheller, Ruhl,	Waterford, N. Y.,	3331 Walnut St.
Baker, Edward Wood,	Brooklyn, N. Y.,	Dorm. 225 Baldwin.
A. B. (Columbia),		
Baldauf, Norton Leopold,	Henderson, Ky.,	140 Paxon St.
Barabe, Edward Joseph,	Negaunee, Mich.,	3446 Chestnut St.
Barker, Horace Ephraim,	Winchester, N. H.,	3331 Walnut St.
Barreiros, Eurico,	São Paulo, Brazil,	3350 Walnut St.
Bassett, Paul Leon,	Bridgeton, N. J.,	3262 Sansom St.
†Blocher, Edgar Thomas,	Littlestown.	
Brown, Irving W.,	Worcester, N. Y.,	225 S. 33d St.
Brown, James Adams,	Whitehall, N. Y.,	216 S. 37th St.
Brown, Robert Wallace,	Philadelphia,	Bala.
Bruce, Louis,	Cornwall Island,	324 S. 11th St.
Bryer, Russell Knowles,	Ontario, Can.,	
Burr, Nelson Amos,	Newport, R. I.,	Dorm. 352 Baldwin.
M. D. (Columbus),	Philadelphia,	3322 Woodland Ave.
D. D. S. (Michigan),		
Cameron, William Morley,	Port Stanley, Ont.,	2401 N. 5th St.
D. D. S. (Philadelphia),	Canada,	
Carleton, James Dexter,	Rockport, Me.,	Dorm. 30 House S.
Carter, John Henry,	Cohoes, N. Y.,	3332 Walnut St.
Cauhēpē, Jean Francois	Paris, France,	3267 Sansom St.
Xavier, Chirurgien Dentiste (Paris),		
Chandler, Asa Munson,	Wilkesbarre,	Dorm. 139 Smith.
Chatfield, Holbrook Alfred,	Auckland, New Zealand,	3350 Walnut St.
Close, Francis Michael,	South Colton, N. Y.,	3617 Locust St.
Cornelius, Arthur Francis,	Rensselaer, N. Y.,	219 S. 33d St.
Cowdery, Lemuel Everett,	Philadelphia,	1720 Delancey Place.
Curry, Emerson George,	Woodstock, Ont.,	3735 Spruce St.
	Canada,	
Dachler, Walter Bernard,	Paris, France,	3637 Locust St.
Chirurgien Dentiste (Paris),		
Dansey, George Frederick	Sydney, N. S. W.,	3350 Walnut St.
Swanson,	Australia,	
Darcissac, Eugene Leon	Paris, France,	3637 Locust St.
Pierre, Chirurgien Dentiste (Paris),		
del Pino, Ernesto,	Cintalapa, Mexico,	3337 Woodland Ave.
Demeulle, Georges Arthur,	Paris, France,	3637 Locust St.
Chirurgien Dentiste (Paris),		

† Degree conferred in University Council, December 10, 1903.

Name.	Residence.	City Address.
Dennis, Charles Augustus, Deravin, Norman Sydney, L. D. S. (England), *Dressor, Chauncey Ely, Ebert, Frederick Joseph,	Philadelphia, Bendigo, Victoria, Australia, South Bethlehem, Fort Vancouver, Wash., Paris, France,	4138 Parrish St. 210 S. 36th St.
Eudlitz, Zacharie, Chirurgien Dentiste (Paris),		Dorm. 366 Baird. 206 S. 36th St.
Ferguson, Alexander, †Ferris, Francis Isaac,	Westerly, R. I., Sydney, N. S. W., Australia,	1128 N. 41st St.
Fitzhardinge, Hardinge Clarence,	Sydney, N. S. W., Australia.	Dorm. 243 Smith.
Forster, Frederick Robert,	Brisbane, Queens- land, Australia,	Dorm. 407 Leidy.
Fraser, Arthur Russell, Freudenfeld, Oscar, Zahn- arzt (Vienna), M. D. (Prag),	Rochester, N. Y., Prag, Austria,	Dorm. 408 Leidy. 120 S. 34th St.
Fuellhart, Fred William, †Gamez, Ramiro Enrique,	Tidioute, Managua, Nicaragua.	3255 Locust St.
Getz, Forry Rohrer, A. B. (Franklin and Mar- shall),	Lancaster,	Dorm. 417 Franklin.
Gladfelter, Wilford Stanley, Gleason, Carl Schurz, †Godden, Henry Danvers,	Seven Valley, McKeesport, Auckland, New Zealand.	3433 Woodland Ave. Dorm. 313 Leidy.
Gold, Charles Edwin, Green, Edward C., Gunn, William Alexander,	Pen Argyl, Hollidaysburg, Timaru, New Zealand,	3255 Locust St. 126 S. 34th St. 1418 Christian St.
Gunton, Leonard Melcherton, Hahn, Ezra Allen, Hales, Leonard Clive,	Camb, England, Nazareth, Wellington, New Zealand,	202 S. 37th St. 3256 Walnut St. 405 N. 33d St.
Harwood, Francis Albert, Hayes, Ford Henderson, Hendrie, William MacAllister, Hermann, Julius Albert, Herrmann, Fredrich Paul, Hesse, John William, Hitzelberger, Albert Charles, Holbrook, Edwin Almus, Hough, William Coleridge Patteson,	Montreal, Canada, Butler, Paterson, N. J., New York, N. Y., Breslau, Germany, Savannah, Ga., Utica, N. Y., New York, N. Y., Sydney, N. S. W., Australia,	3331 Walnut St. Dorm. 442 Hopkinson. Dorm. 352 Baldwin. 216 S. 37th St. 3609 Woodland Ave. 3712 Spruce St. 3713 Woodland Ave. Dorm. 366 Baird. 3350 Walnut St.
Hubbard, George Harrison, Hutchinson, George Edward, Jackson, Andrew Francis,	New Castle, Sunbury, Concepcion, Chile,	Dorm. 30 House S. 3413 Walnut St. 5 S. 38th St.

* Withdrawn.

† Degree conferred in University Council, December 10, 1903.

Name.	Residence.	City Address.
Jaco, Charles Homer, D. D. S. (Philadelphia), Jameson, Norman Lee,	Philadelphia,	1630 Arch St.
Jones, Will Robert, Kassab, Aelyas, Kiess, Howard S., Kingsley, Ralph Raymond, Koons, Fred William, Lapp, P. C. Hollis, Larson, Francis Daniel, Leonard, William Wheeler, Lewis, Oborn Garrett Levis Macdonald, William Douglas,	Richmond Corner, N. B., Canada, New Castle, Chester, Williamsport, Mansfield, Freeland, Philadelphia, Deep River, Conn., Niantic, Conn., Philadelphia, Glenbrook, Conn.,	5 S. 38th St. 333 ¹ Walnut St. [802 Edgmont St.] 3223 Sansom St. 3705 Powelton Ave. 1232 N. 27th St. 417 N. 32d St. 3303 Walnut St. 17 N. 34th St. 5601 Greene St., Gtn. 225 S. 33d St.
Macnamara, Lester Llewellyn, McCausland, Hervey Walton, McEnerney, Francis Patrick, A. B. (Holy Cross), McNulty, Thomas Patrick, Mahaffey, Leroy Robert, Mallery, Claude Mayham, Markham, Perley Haskell, Marks, Laurence Sydney, L. D. S. (Victoria), Martinier, Georges, Chirurgien Dentiste (Paris), Masson, Henri, A. B. (Paris), Chirurgien Dentiste (Paris), Mellersh, Frank,	Worcester, Mass., Philipsburg, Derby, Conn., Norwood, N. Y., Grant, Middleburgh, N. Y., Mexico, N. Y., Melbourne, Victoria, Australia, Paris, France,	3610 Walnut St. 3207 Race St. 3303 Walnut St. 3303 Walnut St. 3713 Locust St. 3420 Sansom St. Dorm. 34 Memorial. 210 S. 36th St. 3256 Chestnut St. do.
Morrish, Albert Garfield, Moxom, Howard Osgood, Mulford, Albert Llewellyn, Myers, Daniel Edward, Ogden, Harold Hyde, O'Neill, Emmett, Jr., Orchard, Hambly Samuel, Orton, Irvine Alexander, † Parks, Robert Roy, Parsons, James Curtis, Patten, James Augustus, Pedroso, Filinto de Moraes, Pettebone, Herbert George, Pierson, Joseph Arthur, L. D. S. (Victoria), Potter, Joseph Albert,	Paignton, Devonshire, England, Wilkesbarre, Springfield, Mass., Camden, N. J., Alexandria, New York, N.Y., Philadelphia, Sing Sing, N. Y., Toronto, Canada, Steelton, Lynchburg, Va., Bloomsburg, São Paulo, Brazil, Fortyfort, Melbourne, Australia, Philadelphia,	3719 Spruce St. Dorm. 139 Smith. Dorm. 373 Leidy. [26 Broadway.] 221 S. 33d St. Dorm. 149 N.Y. Alumni. 4225 Frankford Ave. 3263 Locust St. 3923 Baltimore Ave. 3610 Walnut St. Dorm. 321 Leidy. Dorm. 34 Memorial. 3337 Woodland Ave. 3735 Spruce St. 333 ¹ Walnut St. 3803 Powelton Ave.

† Degree conferred in University Council, December 10, 1903.

DEPARTMENT OF DENTISTRY

Name.	Residence.	City Address.
Portuondo, Francisco de Paula,	Santiago, Cuba,	3445 Woodland Ave.
Powell, George Stanley, L. D. S. (Victoria),	Warrnambool, Victoria, Australia.	210 S. 36th St.
Pyle, Clarence Erwin,	Philadelphia,	3617 Hamilton St.
Quintero, Manuel Justo, A. B. (Lyons),	Lyons, France,	Dorm. 42 Memorial.
Reese, John Heil Vincent,	Atglen,	3933 Baltimore Ave.
Ros, Andres Elijio,	Santiago, Cuba,	3445 Woodland Ave.
Roth, Albert Lewis,	Troy, N. Y.,	Dorm. 322 Leidy.
Rourke, George Henry,	Chicopee Falls, Mass.,	115 S. 34th St.
Ryder, Ernest Nichols,	Brewster, N. Y.,	8 N. 50th St.
Sands, Sidney Alexander,	Goulburn, N. S. W., Australia,	1418 Christian St.
Sayward, Vincent Rogers,	Boston, Mass.,	217 S. 33d St.
Seyfert, Robert Earl,	Pinegrove,	Dorm. 29 Morris.
Shedden, Elwin Robert,	Canton,	19 N. 34th St.
Senior, Oscar,	Port of Spain,	101 S. 34th St.
Simpler, Robert Allen,	Trinidad, B. W. I.,	3126 Columbia Ave.
Sklar, Wolf,	Philadelphia,	1338 S. 5th St.
Stalford, Philip Pawling,	do.	Dorm. 202 Brooks.
Stillman, John Clark,	Ridgefield, Conn.,	Dorm. 225 Baldwin.
Sullivan, William Manley,	Brooklyn, N. Y.,	110 S. 33d St.
Tanquerey, Georges Adolph,	North Adams, Mass.,	3263 Locust St.
Taylor, Charles Stough,	Paris, France,	17 N. 34th St.
Thomas, Jesse Harold,	Clearfield,	2002 Diamond St.
Tracy, Isaac Chalfant,	Philadelphia,	4622 Ditman St., Fkd.
Turpin, Charles Murray,	do.	3735 Spruce St.
Underwood, Amos Parker,	Kingston,	932 Pine St.
Valderrama y Barrenechea, José,	Woodbury, N. J.,	212 S. 33d St.
Vastine, Amos Beeber,	San Sebastian, Spain,	Dorm. 28 Morris.
Vickers, Ernest William,	Danville,	3331 Walnut St.
Welch, Charles Francis,	Enmore, N. S. W., Australia,	Dorm. 28 Morris.
Wildrick, Raymond Gage,	North Adams, Mass.,	408 S. 43d St.
Williams, Percy Norman,	Wenonah, N. J.,	Dorm. 28 Morris.
Zyner, William Isaac,	London, England,	3706 Spruce St.
	Centre Valley,	

SECOND-YEAR CLASS.

Akeroyd, William James Resch,	Dresden, O.,	206 S. 36th St.
Ashplant, Percy Roy,	London, Ont., Canada,	3610 Walnut St.
Aumiller, Benjamin Theodore,	Wightsville,	Dorm. 435 Baird.
Balsinger, William Ernest,	Widnoon,	3713 Locust St.
Barker, William Adams,	Mexico, N. Y.,	Dmor. 394 N Y. Alumni.

Name.	Residence.	City Address.
Barrett, Leland,	Long Branch, N. J.,	3610 Walnut St.
Barry, William Custer Sylvester,	Wallingford, Conn.,	3350 Walnut St.
Bennett, Michael Smith,	Philadelphia,	Olney.
Benson, John Dunn,	Rylstone, N. S. W., Australia,	3350 Walnut St.
Birmingham, Nicholas Donnelly,	Valley Falls, N. Y.,	24 S. 34th St.
Blackmar, Frederic Seward,	Moscow, Mich.,	3617 Locust St.
Bliss, John Walter,	Middletown, Conn.,	1939 Federal St.
Borkin, Israel,	Mensk, Russia,	741 S. 17th St.
Brady, William Francis,	Edmeston, N. Y.,	3266 Sansom St.
Briner, Oscar William,	Philadelphia,	1917 Girard Ave.
Brown, Clifford Morse,	Cambridge, Mass.,	126 S. 34th St.
Burnett, Charles Rogers,	Southampton, N. Y.,	206 S. 36th St.
Burton, Percival Arthur,	Woolahra, Sydney, N. S. W., Australia,	202 S. 37th St.
Butler, George Cadwell,	Honesdale,	3414 Sansom St.
Campbell, David Kenneth,	Brooklyn, N. Y.,	Dorm. 428 Baldwin.
Cann, John Albert,	Wilmington, Del.,	3935 Pine St.
Carey, James Henry,	Rochester, N. Y.,	3610 Walnut St.
Casáres, Adolfo,	Merida, Yucatan, Mexico,	3445 Woodland Ave.
Childs, William Hesser,	Jersey Shore,	206 S. 36th St.
Cline, Nomran Garfield,	King City, Mo.,	3610 Walnut St.
Coe, Walter Frederick,	Brisbane, Queens- land, Australia,	3350 Walnut St.
Coffin, Carl Sargent, A. B. (Bates),	Thorndike, Me.,	Dorm. 46 Bodine.
Constien, Frederick Wm.,	Ashland,	Dorm. 361 Baird.
Cook, William Gladden, A. B. (Westminster),	McDonald,	210 S. 36th St.
Cooper, Jesse Frank,	Worcester, Mass.,	3435 Walnut St.
Cordick, Charles Henry,	Lemesurier, Quebec, Canada,	3258 Chancellor St.
Cowlishaw, Eric Burgoyne Owen,	Brisbane, Queens- land, Australia,	3350 Walnut St.
Crane, William Burnett,	Mobile, Ala.,	3332 Walnut St.
Craver, Leslie Metzler,	Scanlin,	3263 Locust St.
Darrow, Harry Nordell,	New London, Conn.,	Dorm. 219 McKean.
Davidson, Hugh Mont- gomery,	Brisbane, Queens- land, Australia,	3350 Walnut St.
Dismant, John Walt,	Limerick,	3218 Wallace St.
Donahower, Arthur Franklin,	Lewisburg,	2047 N. 19th St.
Downey, William Simpson,	Philadelphia,	2361 E. Dauphin St.
Eaton, Leslie Emerson, A. B. (Acadia),	Canning, N. S., Canada,	3267 Chancellor St.
Evan-Jones, Edward,	Surrey, England,	3434 Walnut St.
Eves, Carl,	Millville,	Dorm. 22 Memorial.
Ewing, Charles Agnew,	West Grove,	3322 Woodland Ave.
Fahy, George Christopher,	New Haven, Conn.,	Dorm. 43 Memorial.

DEPARTMENT OF DENTISTRY.

Name	Residence.	City Address.
Farnham, Robert Henry, Felt, Leon Rex, Ferrin, Whitman George, Frank Carlton Byford, Furbush, Harold Laurence, Gallico, James Edward, Gibb, William Louis, Glaspay, Maurice Alan, Glynn, Thomas Henry, Goldsmith, Walter Nathan, Goldwater, Arnold Tyroler, Graffam, Bernard Clement, Griffin, Francis Dennis, Hammann, Charles Edward, Hardt, Henry William, Jr., Harrower, Foster Flagg, Hellman, Milo, Herrington, James Milton, Hervey, Wallwyn, Hilborn, William Eugene, Hodgson, Francis Henry, Hollenback, John Coffey, Homburger, Oscar, Hunter, Arthur Munson, Husband, Arthur Cyril, Jarvis, George Oglevie, Ph. B. (Wesleyan), M. D. (Pennsylvania), Jones, Walter Edwin, Kase, Daniel Beaver, Kellogg, Charles Maydole, Kirkham, John, Jr., *Kreidel, Emanuel Zebastain,	Westerly, R. I., Emporium, Montpelier, Vt., Niagara Falls, N. Y., Auburn, Me., Troy, N. Y., New Haven, Conn., Bridgeton, N. J., Winsted, Conn., Connellsville, New York, N. Y., Augusta, Me., Northampton, Mass., Rome, N. Y., Newark, N. J., Swarthmore, New York, N. Y., Canandaigua, N. Y., Newark, N. J., Portland, Me., Schenectady, N. Y., Philipsburg, New York, N. Y., Bridgeport, Conn., Alley, Jamaica, Philadelphia,	Dorm. 246 Lippincott. 3322 Woodland Ave. Dorm. 362 Baird. Dorm. 222 McKean. 3319 Walnut St. 3332 Walnut St. Dorm. 21 Memorial. 3332 Woodland Ave. 3412 Ludlow St. 3615 Locust St. 1431 Ellsworth St. 3223 Sansom St. 3721 Spruce St. Dorm. 223 McKean. Dorm. 43 Memorial. 108 S. 33d St. Dorm. 362 Baird. 225 S. 33d St. 3422 Sansom St. 3214 Chestnut St. 3313 Walnut St. 111 S. 34th St. Dorm. 135 Fitler. 3704 Spruce St. 769 S. 10th St.
Krimmel, Joseph Jacob, Lamb, Harold William,	Bridgeport, Conn., Philadelphia, Herkimer, N. Y., Glenbrook, Conn., Ellensburg, Washington.	Dorm. 135 Fitler. 3334 Walnut St. 3435 Walnut St. Dorm. 202 Brooks.
Lamp, Erwin Robert, Layman, Frank Peter, Lemis, George Thomas, Lewis, Arley Caryl, Lillis, James Thomas, Jr., Lockett, Alfred Cookman, Lockwood, Lester David, Luce, Robert Rensselaer, MacDonald, James Train, Macdonald, Thomas Forrester, McDonald, Richard Francis,	Pine Grove, South Hadley Falls, Mass., Milwaukee, Wis., West Terry, Palm Beach, Fla., Middleburg, N. Y., Jersey City, N. J., Bloomington, Ill., Bridgeport, Conn., Scranton, Paterson, N. J., North Sydney, N. S., Canada, Manchester, N. H.,	Dorm. 37 Bodine. 3610 Walnut St. 3617 Locust St. 64 N. 36th St. 3941 Baltimore Ave. 3420 Sansom St. Dorm. 248 Carruth. 3331 Walnut St. Dorm. 11 Bodine. Dorm. 34 Morris. Dorm. 51 Morris. 3267 Chancellor St. 3933 Baltimore Ave.

* Not in attendance.

Name.	Residence.	City Address.
McEnany, James Bernard, McEnany, John Francis, McEwen, James Fraser,	Chelsea, Mich., Battle Creek, Mich., Campbelltown, N. S. W., Australia,	3706 Brandywine St. 3706 Brandywine St. 3331 Walnut St.
McKeage, George Ernest, McKone, Nicholas Joseph, Massell, James Hirsh, Melick, Walter, Merkle, Albert Edward, Merriman, Angier Clarence, Moffett, William Newton, Molle, Eric Frederick,	Tingwick, Canada, Hartford, Conn., Miadel, Russia, Phillipsburg, N. J., Tidioute, Topsham, Maine, Detroit, Mich., Brisbane, Queensland, Australia,	3608 Locust St. 206 S. 36th St. 3802 Haverford Ave. Dorm. 452 Alumni. 3319 Walnut St. 3705 Woodland Ave. 3617 Locust St. 3350 Walnut St.
Moore, Seymour Victor, Morgan, Rufus Kelsay, Neill, Ira Lesgar,	Sandy Hill, N. Y., Woodbury, N. J., New Armagh, Quebec, Canada, Canton, S. Dak., Sydney, N. S. W., Australia,	3445 Woodland Ave. [103 S. Broad St.] 3258 Chancellor St.
O'Neil, Guy Edward, Orr, Hubert Wesley,	Berlin, Germany, Elmira, N. Y., Concord, N. H., Washington, Vienna, Austria, New Haven, Conn., Easton, Christchurch, New Zealand,	3610 Walnut St. 3350 Walnut St.
Ostrowski, Waldemar von, Peterson, Henry Arthur, Ray, Harry Clifford, Reckers, James Bernard, Reichenberger, Ernst, Richards, Edward Louis, Richards, Willard Huhn, Sandstein, Arthur Samuel,	St. Johnsville, N. Y., Newark, N. J.,	3316 Woodland Ave. 3913 Baltimore Ave. Dorm. 140 Smith. 3615 Locust St. 120 S. 34th St. 120 S. 34th St. 3608 Locust St. 210 S. 36th St.
Scheffer, Gordon Lee, Schienier, Frederick Franklin, Jr., Schierenbeck, Albert Edward,	New York, N. Y.,	3725 Locust St. 3610 Walnut St.
Senior, Philip Henry, Shaffer, John Winey, Sherman, Frank Munson, Sippel, John Conrad, Smith, Samuel Styer Prim- rose.	Holyoke, Mass., Philadelphia, Watertown, N. Y., Freeland, Chester,	3413 Walnut St. 3741 Spruce St. 1618 N. 54th St. 4105 Chester Ave. 3735 Spruce St. [2108 W. 3d St.]
Spencer, J. Wright, Spicer, Albert Hamilton, Jr., Spriggs, Charles James, Stevenson, Edward Stuart,	Barton, N. Y., Westerly, R. I., Rome, N. Y., Auckland, New Zealand,	64 N. 36th St. Dorm. 243 Smith. Dorm. 423 McKean. 3435 Walnut St.
Steeley, Jacob Oswin, Stoltze, Valentine August, Sutherland, Arnold Har- wood, Sweeting, Charles Cecil,	Perkasie, Brooklyn, N. Y., Altoona,	2236 N. Sydenham St. Dorm. 428 Baldwin. Dorm. 46 House P.
	Nassau, New Prov- idence, Bahamas,	3435 Walnut St.

Name.	Residence.	City Address.
Taggart, Deane Pettis, Thomas, Dillard Jefferson, Thompson, John Hedges,	Miller's Falls, Mass., St. Joseph, Mo., Fernandina, Fla.,	Dorm. 303 Brooks. 3610 Walnut St. [909 Upland St., Chester, Pa.]
Tobin, James Michael, Tracy, Llewellyn, Updegraff, John Wilbert, Voelker, Charles Christopher, Wagner, Miles Delroy, Walker, Andrew Robertson,	Troy, Philadelphia, Fort Palmer, Brooklyn, N. Y., Milton, Brisbane, Queensland, Australia,	3445 Woodland Ave. 4434 Chestnut St. 3608 Walnut St. Dorm. 412 Leidy. 3347 Woodland Ave. 3350 Walnut St.
Webb, William Charles, Wenk, Karl Edwards, Westerberg, August, Wharen, Ralph Harrison, Wood, Gilbert Haven, Wright, Ernest,	Honesdale, Tionesta, Stockholm, Sweden, Wilkesbarre, Bellefonte, Auckland, New Zealand, South Bethlehem, Phillipsburg, N. J.,	3443 Woodland Ave. Dorm. 369 Hopkinson. 3610 Walnut St. 19 N. 34th St. Dorm. 390 Lippincott. 3350 Walnut St.
Young, William George, Zulauf, Robert,		3610 Walnut St. 3347 Woodland Ave.

FIRST-YEAR CLASS.

Ainey, Albert Earle,	Brooklyn,	225 S. 33d St.
Atherton, Ralph Nelson,	Scranton,	Dorm. 252 Alumni.
Barone, Floyd Leech,	Watertown, N. Y.,	3262 Sansom St.
Barry, Walter Francis Leo,	Orange, N. J.,	3741 Spruce St.
Baxter, James Le Roy,	Newark, N. J.,	1905 Christian St.
*Bortin, Eli Samuel,	Kiev, Russia,	612 Washington Ave.
*Bowman, George Alfred,	Williamsport.	
Brigham, Arthur Foster,	Brockton, Mass.,	3204 Chestnut St.
Brosnan, John Joseph,	Wallingford, Conn.,	3430 Sansom St.
Brown, Arthur Peter,	Hazleton,	3941 Baltimore Ave.
Burke, Michael Richard,	Cohoes, N. Y.,	3332 Walnut St.
Corman, John Ramsey,	Danville,	3312 Woodland Ave.
Craig, Harold Rush,	New Bethlehem,	Dorm. 151 Alumni.
Crum, John Oliver,	Altoona,	Dorm. 31 House S.
Davies, George Johnston,	South Orange, N. J.,	Dorm. 48 House P.
Detweiler, Isaac Caleb,	Easton,	326 N. 61st St.
Dewhurst, Edward Bury,	Sydney, Australia,	3350 Walnut St.
Erickson, Carlile Snyder,	Philadelphia,	3925 Haverford Ave.
Feldman, Harold Clarence,	New York, N. Y.,	3204 Chestnut St.
Francis, John Richard, Jr.,	Washington, D. C.,	Dorm. 440 Hopkinson.
Gibson, Edwin Lawrence,	Washington,	3615 Locust St.
Gleason, Stuart Birch,	Passaic, N. J.,	3702 Spruce St.
Greenberg, William Bradford,	Waterbury, Conn.,	Dorm. 32 Bodine.
*Grosh, Edgar Samuel,	Bethlehem.	
Haskins, Guy,	Christschurch, New Zealand,	3344 Walnut St.

* Not in attendance.

Name.	Residence.	City Address.
Hay, Leslie Miller, Henson, Douglas Ottinger, Holden, Dana Allen, Holland, Mervyn Arthur, Huber, Dawson Heather, Hunter, George Scott, Jereissati, Khalil Moosa, Kennedy, Edward, Kitchenman, John, Leaming, Lewis Cresse, Lipschutz, Solomon Hirsh, McAuliff, Walter Van Ben Schotен,	Cohoes, N. Y., Philadelphia, Chester, Vt., Brisbane, Australia, Scranton, Hartford, Conn., Zahleh, Syria, Philadelphia, do. South Dennis, N.J., Philadelphia, East Hampton, L.I.,	3332 Walnut St. 4837 Germantown Ave. 3322 Woodland Ave. 3350 Walnut St. 4226 Chester Ave. 3257 Locust St. 3434 Sansom St. 2042 Master St. 2445 Howard St. Dorm. 406 Brooks. 1419 Diamond St. 3429 Walnut St.
McCowan, John Rupert, Mallon, James Raymond, Martens, William George, Muir, Andrew Robertson, Müller, Waldemar Alfred, O'Connor, George Gregg, Ozaki, Marezo,	West Chester, Philadelphia, Brooklyn, N. Y., Scranton, Brooklyn, N. Y., Margaretville, N. Y., Hiraka, Naganoken, Japan,	[122 S. High St.] 1935 N. 7th St. 215 S. 33d St. Dorm. 398 N.Y. Alumni. 3251 Sansom St. 117 S. 34th St. 3437 Chestnut St.
Peeso, Frank Walsworth, Peplow, Edward Hadduck, Price, Max, Pulver, George Winfield, Quintero, James Thompson, A. B. (Lyons), Ratzburg, Fred, Reedy, William Aloysius, Roberts, Harold Edwin,	Philadelphia, Trenton, N. J., Paltava, Russia, Hancock, N. Y., Lyons, France, Shreveport, La., Scranton, Philadelphia,	4251 Regent Square. 120 S. 34th St. 3316 Chestnut St. 3429 Walnut St. Dorm. 42 Memorial. 3319 Walnut St. 3313 Walnut St. 420 W. Chelten Ave., Gtn.
Scott, LeRoy Lucien, Sharpless, William Harold, Sherlock, Thomas Francis, Simpson, Edsall Ferrier, Smith, Eugene Alonzo, Spangenberg, Daniel Welsh, Spicer, Stanley Williams,	Scranton, Catawissa, Albany, N. Y., Scranton, Ellerslie, Md., Washington, N. J., Spencer's Island, Canada,	120 S. 34th St. 120 S. 34th St. 3323 Walnut St. 101 S. 34th St. 5 S. 38th St. 3326 Walnut St. 213 S. 33d St.
Steigerwald, Clarence Sebas- tian, Stevenson, William Douglas, Tizzard, Russel Blair, Torruella y Cortada, Rafael, Van Loan, Karl Frederic, Van Ness, Ward Milton, Waas, Milton Jacob, Weede, Garfield Wilson, Weintraub, Maximilian Marchaud, Wesbecher, Bernard,	Philadelphia, Seattle, Wash., Los Angeles, Cal., Ponce, Porto Rico, Elmira, N. Y., Bridgeport, Conn., Hammonton, N. J., Sterling, Kansas, Philadelphia, New Haven, Conn.,	999 N. 5th St. 3319 Walnut St. Dorm. 434 Class of '87. Dorm. 124 Baldwin. Dorm. 392 N.Y. Alumni. 3727 Spruce St. 773 N. 43d St. 304 South St. 3251 Sansom St.

Name.	Residence.	City Address.
Winner, Norman James,	Wilmington, Del.,	[605 King St.]
Wood, William Hollon,	Athol, Mass.,	215 S. 33d St.
Wotherspoon, Hermann Guilike,	New York, N. Y.,	333 ² Walnut St.

SPECIAL STUDENTS.

Belaval, Germanico Saxtrano, Ponce, Porto Rico,	252 S. 9th St.
D. D. S. (Baltimore),	
Cowper, Arthur Edwin, Wanganui, New Zealand,	3706 Spruce St.
Casse, Robert Augustin, Paris, France,	3429 Walnut St.
M. D. (Paris),	
Foster, Harry Percy Rae, Auckland, New Zealand,	210 S. 36th St.
Strang, Robert Hallock Bridgeport, Conn.,	3610 Walnut St.
Wright, D. D. S. (Univ. of Penna.),	
Sevilla y Astaburuaga, Castor, Bilboa, Spain,	110 S. 33d St.
Ormiston, Faulkner Andrew, Sydney, Australia,	3721 Spruce St.

SUMMARY.

Students of the Third-year Class	138
Students of the Second-year Class	145
Students of the First-year Class	72
Special Students	7
Total	362



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